

## Title (en)

Method of manufacturing transition metal oxide rod

## Title (de)

Verfahren zur Herstellung von Stäbchen aus Übergangsmetalloxiden

## Title (fr)

Procédé de fabrication d'un bâtonnet d'oxydes métalliques de transition

## Publication

**EP 2218787 A1 20100818 (EN)**

## Application

**EP 09166859 A 20090730**

## Priority

KR 20090011628 A 20090212

## Abstract (en)

The present invention relates to an organic-inorganic composite comprising bacteria and transition metal oxides and a method of manufacturing the same. More specifically, the present invention relates to an organic-inorganic composite comprising bacteria and transition metal oxides manufactured by attaching cationic transition metal precursor to bacterial surface, wherein the bacteria with high negative charge on its surface is used as a template, refluxing the bacteria and transition metal ions at room temperature in the presence of sodium borohydride (NaBH<sub>4</sub>), and inducing reduction/spontaneous oxidation, thereby having an excellent high capacity electrochemical properties, and a method of manufacturing the same. Therefore, the method of manufacturing the organic-inorganic composite according to the present invention has advantages that it enables to reduce manufacturing cost and the time required therein, mass production, low temperature synthesis, synthesis of uniform nano-structures, control of one dimensional type, be applied to other metal oxides, thus being expected to be used as parts in other electrochemical fields including lithium secondary batteries, super capacitor, nanoelectro-optical system, catalyst and the like.

## IPC 8 full level

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